Electronic Supplementary Material (ESI) for Molecular BioSystems.

Supplementary Information

Cell cytotoxicity and serum albumin binding capacity of the morin-Cu(II) complex and its effect on deoxyribonucleic acid

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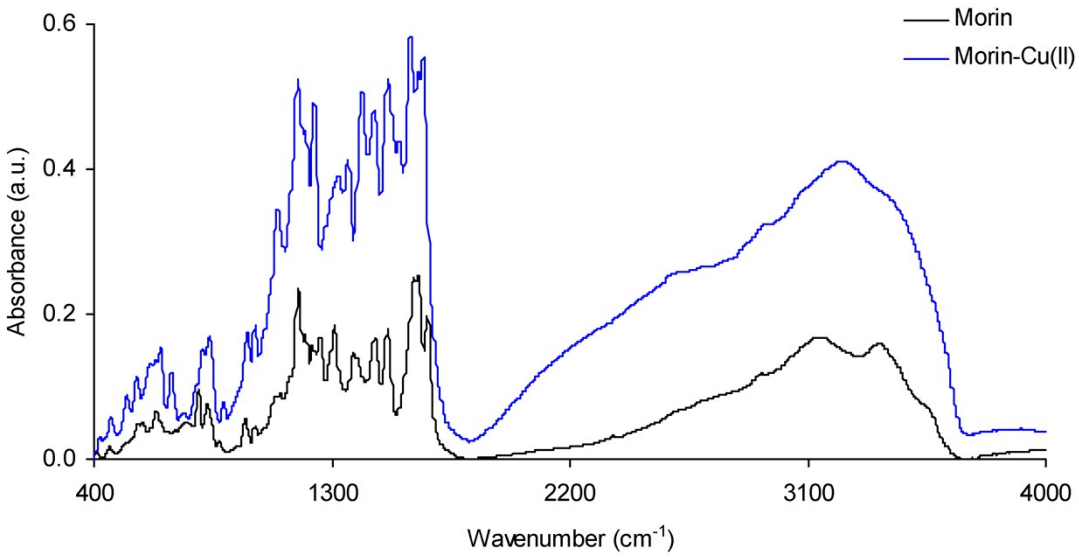


Fig. S1. FTIR spectra of morin and its Cu(II) complex in solid state.

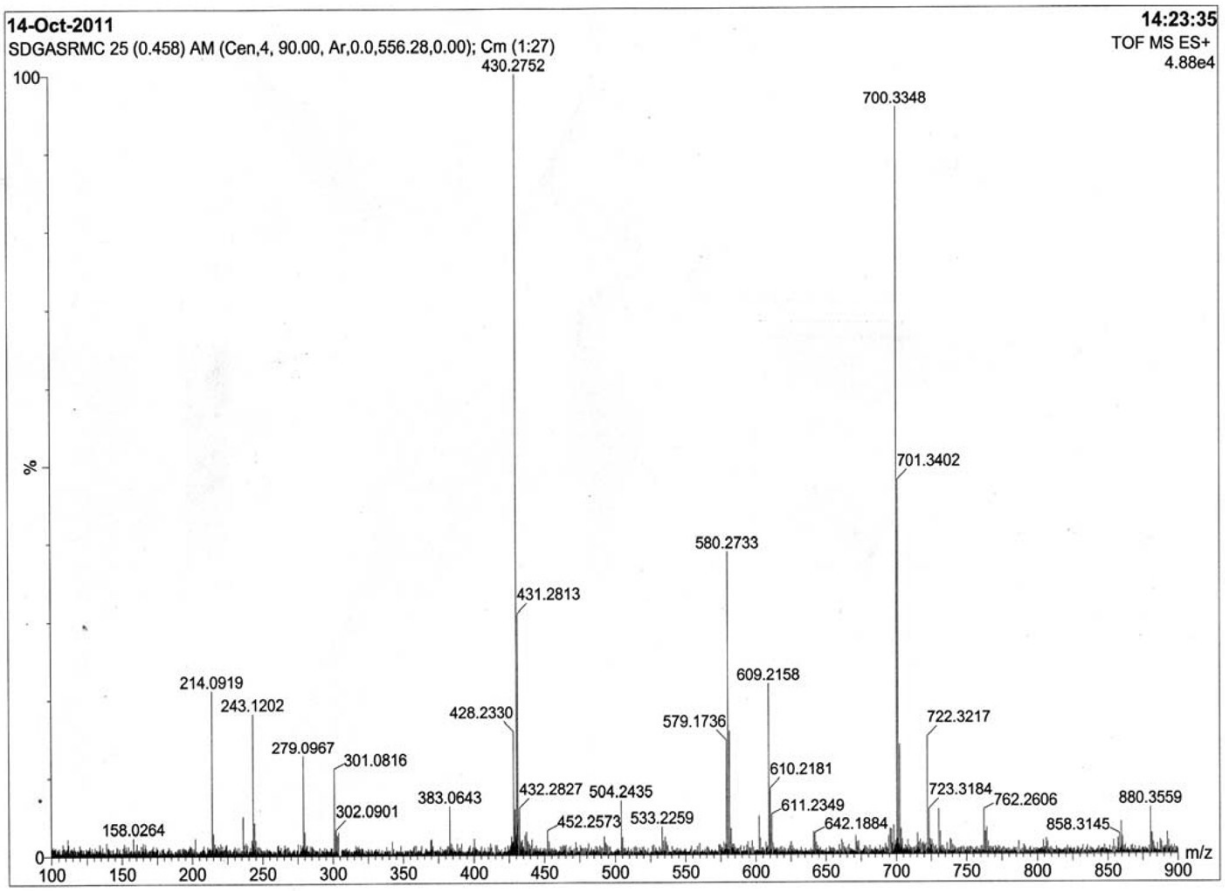


Fig. S2. LRMS-ESI+ mass spectra of the morin-Cu(II) complex. Complex was dissolved in acetonitrile.

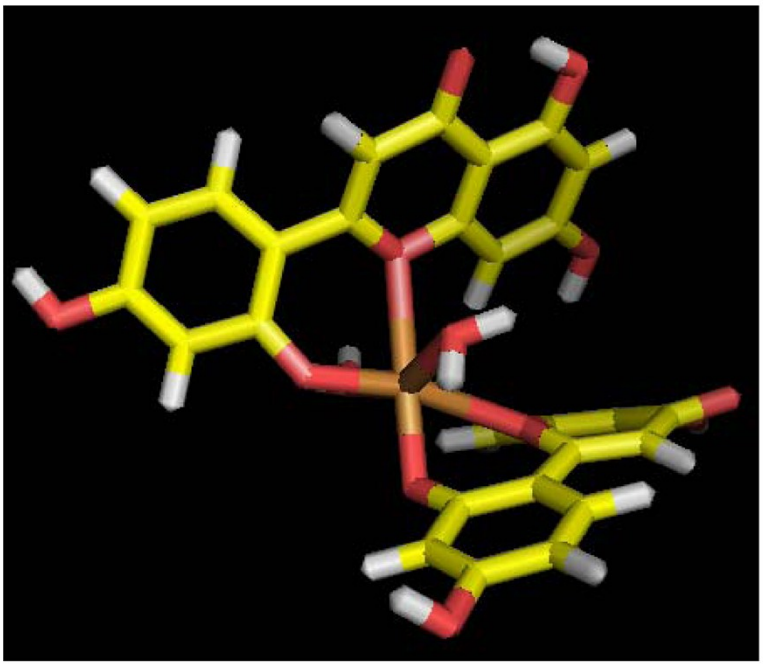
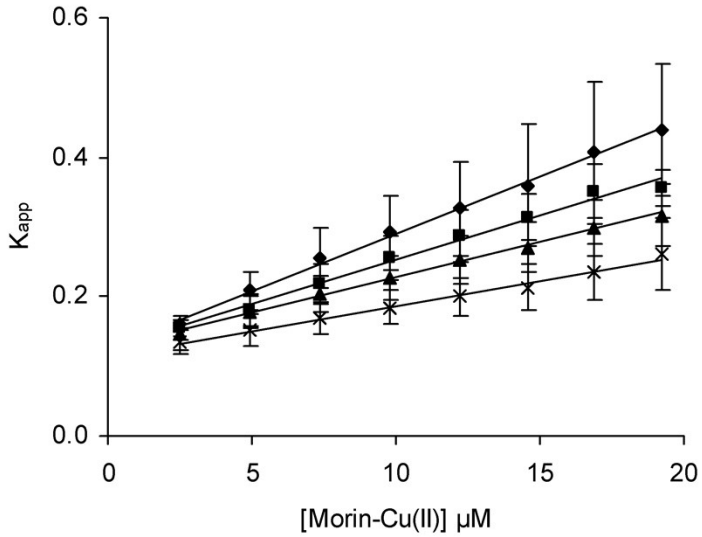


Fig. S3. Energy optimized structure of the morin-Cu(II) complex

(a)



(b)

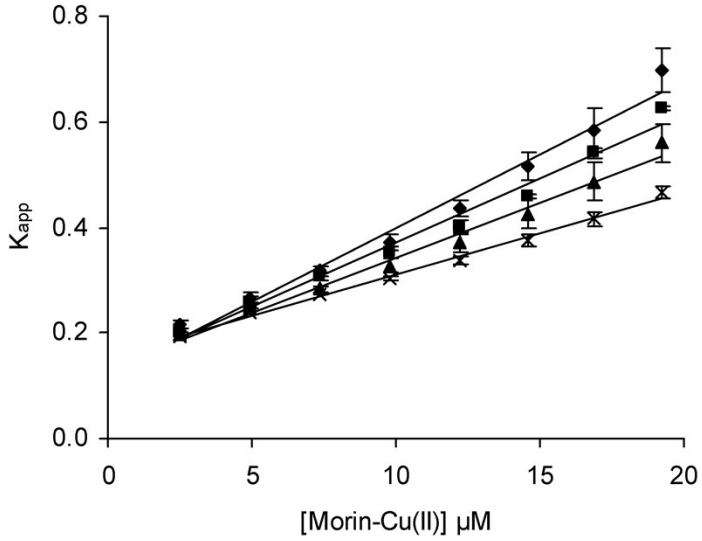
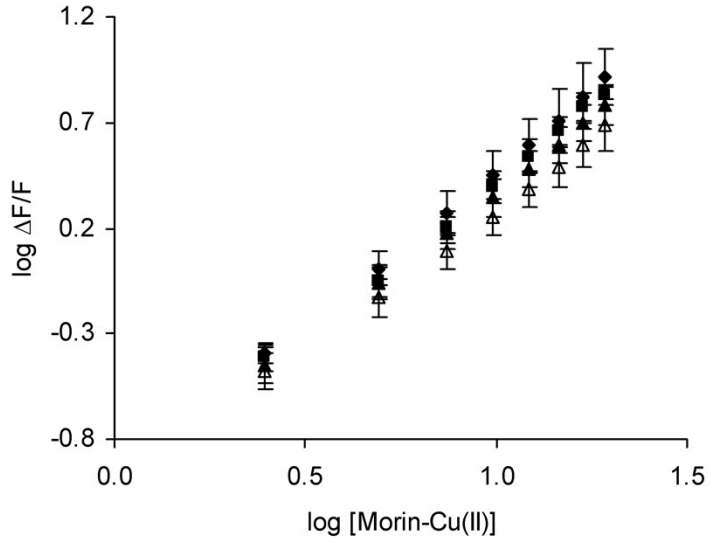


Fig. S4. Regression plots for the interaction of the morin-Cu(II) complex with (a) HSA and (b) BSA. (♦) 288 K;(■) 295 K;(▲) 302 K and (×) 309 K; λ_{ex}: 295 nm.

(a)



(b)

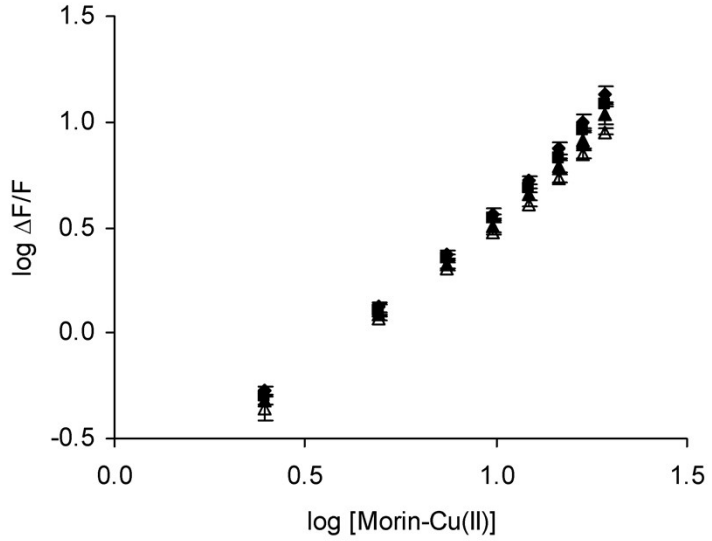


Fig. S5. Determination of the binding constant for the interaction of the morin-Cu(II) complex with (a) HSA and (b) BSA at different temperature. (♦) 288 K;(■) 295 K;(▲) 302 K and (Δ) 309 K; λ_{ex}: 295 nm.

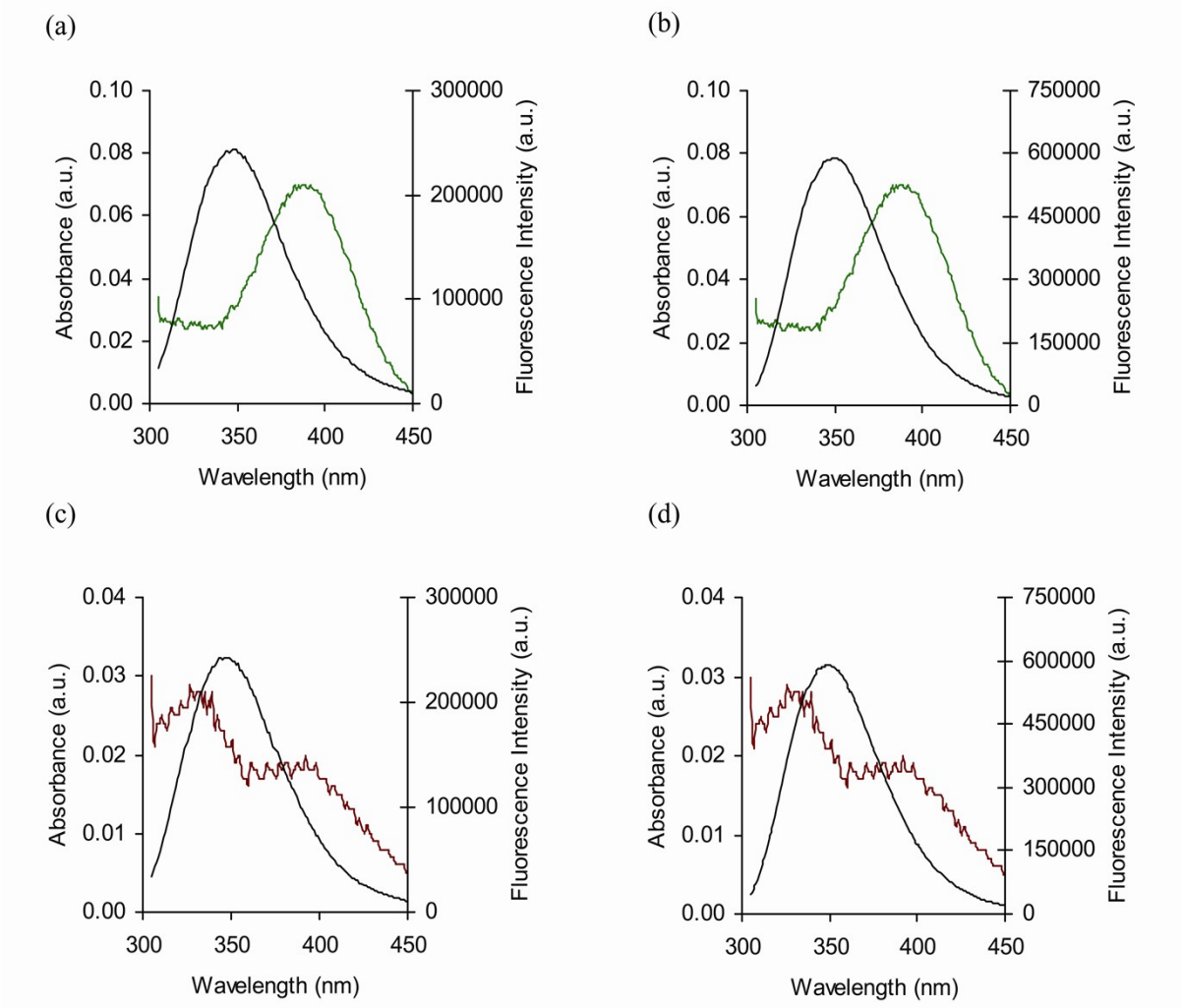


Fig. S6. Spectral overlap between the fluorescence emission spectrum of SAs (black line) and the absorption spectrum of ligands (green or brown line) for (a) HSA-morin, (b) BSA-morin, (c) HSA-morin-Cu(II), (d) BSA-morin-Cu(II) at [ligand]/[protein]=1:1; λ_{ex}: 295 nm and λ_{em}: 347 nm.

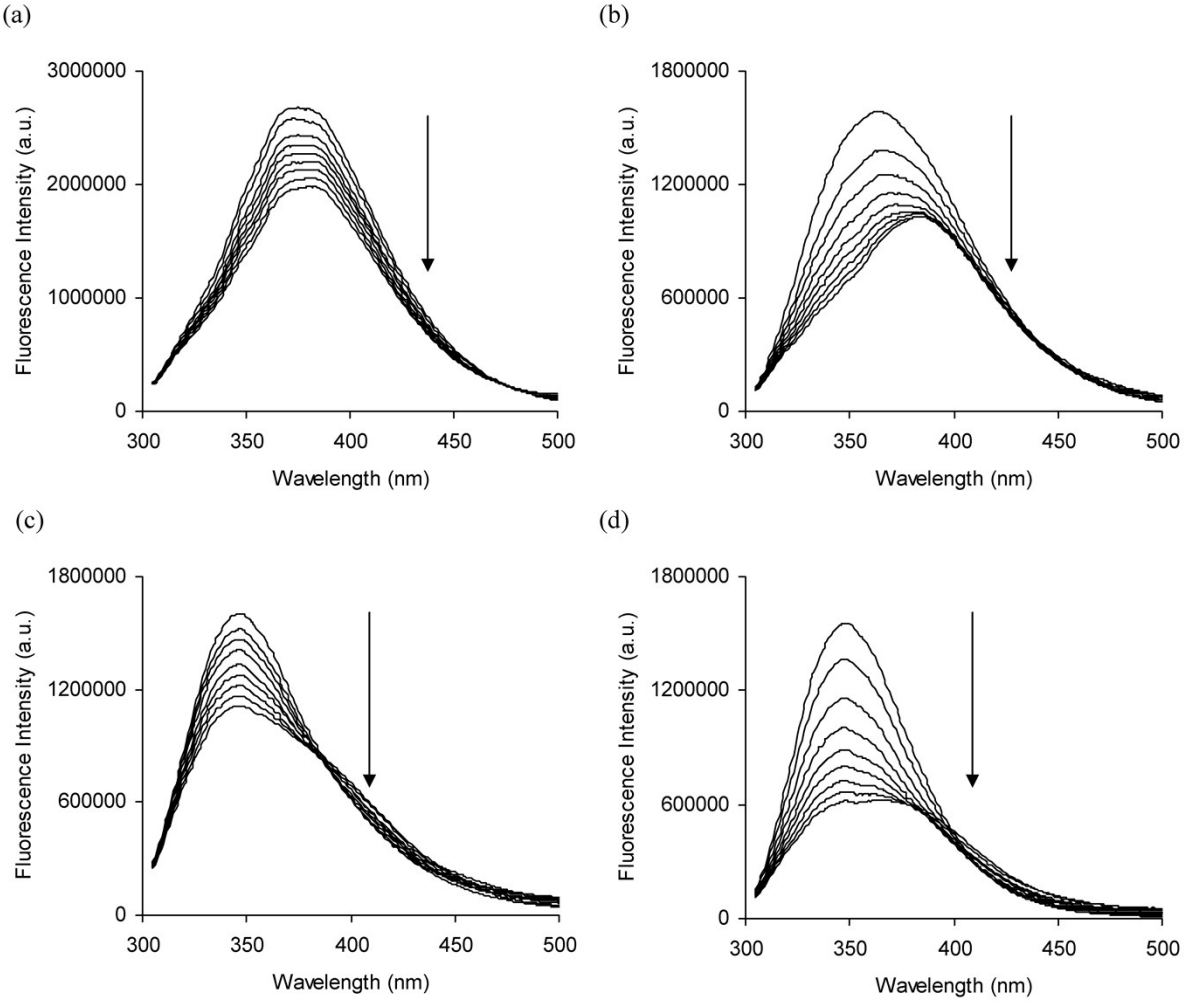


Fig. S7. Fluorescence emission spectra of (a) HSA-warfarin, (b) BSA-warfarin, (c) HSA-ibuprofen and (d) BSA-ibuprofen systems in absence and presence of morin-Cu(II) complex (0 to 19 μM) in pH 7.0 at 22 °C. [SAs] = [Warfarin or ibuprofen] = 2 μM; λ_{ex}: 295 nm.

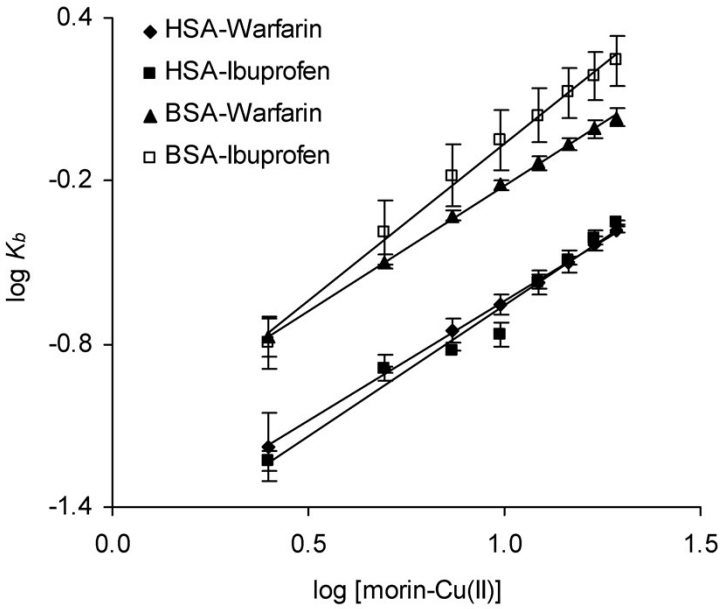


Fig. S8. Determination of the binding constant for the interaction of the morin-Cu(II) complex with SAs in presence of site markers at 22 °C. λ_{ex}: 295 nm.

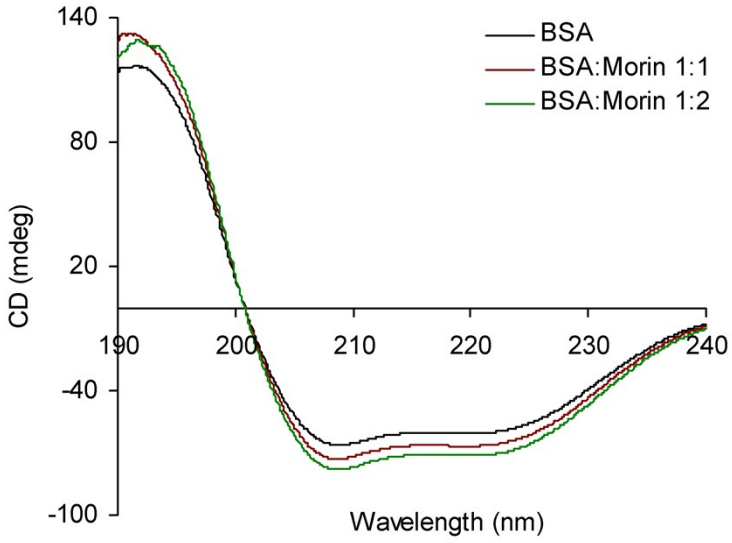


Fig. S9. Far UV-CD spectra of BSA (black line) and its 1:1, 1:2 complexes with morin in 20 mM phosphate buffer of pH 7.0. [BSA] = 5 μM.

Table S1. Assignment of the main IR bands of morin and morin-Cu(II) complexes

Bands	Morin	Morin-Cu(II) complex
$\nu_{C=O}$	1662 (s)	1650 (s)
ν_{C-O-C}	1255 (s)	1234 (s)
ν_{M-O}	-	524 (s)
$\nu_{C2'-OH}$	1309 (s)	1360 (s)
ν_{O-H}	3374 (b)	3064-3450 (b)

‘s’ stands for sharp and ‘b’ stands for broad